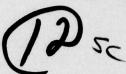


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July 1978 DR-974



METEOROLOGICAL DATA REPORT

12832A LANCE MISSILE NO. 3330, ROUND NO. 315 ACT (15 JUNE 1978)

BY

WSMR METEOROLOGICAL TEAM



ATMOSPHERIC SCIENCES LABORATORY WHITE SANDS MISSILE RANGE, NEW MEXICO

78 08 29 070

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

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INTRODUCTION

12832A Lance, Missile Number 3330, Round Number 315 ACT, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0850 HRS MDT, 15 June 1978. The scheduled launch time was 0830 HRS MDT.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	4,179.9	FEET/MSL
PRESSURE	883.1	MBS
TEMPERATURE	26.5	°C
RELATIVE HUMIDITY	33	%
DEW POINT	9.3	°c
DENSITY	1,023.3	GM/M ³
WIND SPEED	02	МРН
WIND DIRECTION	330	DEGREES
CLOUD COVER	.3	Ac

TABLE I. Surface Observations taken at LC-33 at 0850 HRS MDT/15 June 1978

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	280	3.0	2100	354	5.5
100	281	3.0	2200	353	3.5
200	281	3.0	. 2300	340	6.5
300	275	3.0	2400	326	9.5
400	268	3.0	2500	329	10.5
500	238	4.0	2600	331	11.5
600	208	4.5	2700	321	18.0
700	168	4.0	2800	311	24.0
800	127	3.0	2900	313	24.0
900	139	4.5	3000	314	23.5
1000	151	5.5	3100	316	24.0
1100	205	4.0	3200	318	24.0
1200	258	2.0	3300	320	24.5
1300	267	4.0	3400	321	25.0
1400	275	5.5	3500	322	25.5
1500	302	6.0	3600	322	25.5
1600	329	6.5	3700	323	24.5
1700	318	6.0	3800	324	23.0
1800	307	5.5	3900	323	22.0
1900	331	6.5	4000	322	20.5
2000	355	7.0	4100	318	19.5

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM LC-33 AT 0820 HRS MDT/15 JUNE 1978
12832A LANCE, MISSILE NO. 3330, ROUND NO. 315 ACT

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 1/2 MILE SW OF LAUNCHER.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	314	18.0
4300	309	17.5
4400	303	16.5
4500	302	17.0
4600	301	17.0
4700	301	17.5
4800	301	18.0
4900	302	18.0
5000	302	18.0
5100	302	18.0
5200	301	17.5
5300	303	17.0
5400	305	16.0
5500	306	16.0
5600	306	15.5
5700	307	15.5
5800	307	15.5
5900	308	16.0
6000	309	16.0
6100	311	16.0
6200	313	16.0
6300	316	15.5
6400	318	15.0
6500	321	14.5
6600	324	13.5

UP T CUM	Dianastar	
HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6700	324	13.0
6800	324	12.0
6900	325	11.5
7000	326	11.0
7100	326	11.0
7200	326	11.0
7300	327	11.0
7400	327	10.5
7500	327	10.5
7600	327	10.0
7700	325	9.5
7800	322	8.5
7900	317	7.5
8000	312	6.0
8100	308	5.5
8200	304	5.0
8300	304	5.0
8400	303	4.5
8500	302	4.5
8600	301	4.0
8700	301	4.0
. 8800	300	4.0
8900	301	4.5
9000	302	4.5
5 4 5		

TABLE II. (CONT)

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	330	2.0
100	004	2.5
200	037	2.5
300	036	3.0
400	032	4.0
500	094	4.0
600	148	4.0
700	154	4.5
800	159	4.5
900	235	4.0
1000	311	3.5
1100	317	6.0
1200	322	8.4
1300	336	10.0
1400	349	11.5
1500	351	13.0
1600	352	14.0
1700	346	11.0
1800	340	7.5
1900	329	8.0
2000	317	8.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	313	11.0
2200	309	13.0
2300	313	14.0
2400	316	14.5
2500	317	16.5
2600	317	18.0
2700	322	17.0
2800	326	17.0
2900	323	18.0
3000	319	19.5
3100	323	18.5
3200	326	17.0
3300	327	17.0
3400	328	17.0
3500	315	14.5
3600	301	11.5
3700	301	13.0
3800	300	14.0
3900	302	14.5
4000	304	14.5
4100	299	15.5

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-33, AT 0850 HRS MDT/15 JUNE 1978
12832A LANCE, MISSILE NO. 3330, ROUND NO. 315 ACT

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 1/2 MILE SW OF LAUNCHER.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	294	15.0
4300	294	16.5
4400	293	16.5
4500	292	16.5
4600	290	16.0
4700	298	17.5
4800	306	18.5
4900	306	19.0
5000	305	19.5
5100	300	19.0
5200	295	18.5
5300	305	20.0
5400	315	21.5
5500	310	20.0
5600	304	18.0
5700	304	18.0
5800	304	18.0
5900	308	18.0
6000	311	18.0
6100	306	16.5
6200	301	15.0
6300	306	14.5
6400	310	14.0
6500	303	13.0
6600	295	11.5

		"
HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6700	306	13.5
6800	316	15.0
6900	315	15.0
7000	313	15.0
7100	311	14.5
7200	309	14.0
7300	312	13.0
7400	315	11.5
7500	314	11.5
7600	313	11.0
7700	315	11.5
7800	317	12.0
7900	316	11.5
8000	314	11.0
8100	307	11.0
8200	299	10.5
8300	298	10.0
8400	297	9.0
8500	309	8.5
8600	320	8.0
8700	319	8.0
8800	317	8.0
8900	312	8.0
9000	306	7.5

TABLE III. (CONT)

T-TIME (SEC)	DIR DEG	SPEED (MPH)
-30.0	360	0.5
-25.0	000	0.0
-20.0	360	0.5
-15.0	000	0.0
-10.0	000	0.0
-5.0	000	0.0
-0.0	000	0.0
+5.0	000	0.0
+10.0	335	0.5

TABLE IV. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 2
RELEASED FROM LC-33, AT 0820 HRS MDT/15 JUNE 1978
12832A LANCE, MISSILE NO. 3330, ROUND NO. 315 ACT

WSTM COORDINATES: X = 486,296.83 Y = 185,251.85 Z = 4,179.9

3989.00 FEE 0840 HRS	STATION ALTITUDE 3989.00 FEET MSL 15 JUNE 78 0840 HRS MDT ASCENSION NO. 374	T MSL	MDT	
	78 78 N NO. 37	3989.00 FEE	0840 HRS	•

DATA			
SIGNIFICANT LEVEL	1660020374	WHITE SANDS	TABLE V.

GEODETIC COORDINATES 32.40043 LAT DEG 106.37033 LON DEG

۵	PRESSURE	GEOMET	TEMPERATURE AIR DEWPOI	JRE	REL.HUN
M	MILLIBAR	FEE	E E	IGRADE	
	81.	.686		•	•
	73.	233.	.9		
	850.0	032.	•		
	19.	104.	5		
	00	550.	5	5.2	
	617.4	.066		•	
		543.	1.6		63.0
	53.	901.		5	
	10.	018.	-5.3 -1		
	00	538.	1- 4.7-	1.7	
	85.	317.	6.8-	3	
	68.	193.	-9.6	-	
	29.	396	•	3	
	14.	297.	•	3	
	00	164.	•		
	300.0	045.	. 8.	6	
	67.	582.	+00+-		
	20.	167.			
	15.	576.	-		
	00	. 466	÷		
	50.	.616	5		
	26.	372.			
	11:	146.	70.1		
	. 40	970.			
	100.0	54887.0			
	85.0	.780	₩.69-		

3989.00 FEET MSL	E
ET	₹.
F.	HRS
00	840
68	õ
39	374
30	6
E	15 JUNE 78 ASCENSION NO. 3
A	e z
Z	316
Ë	SS
ST.	200

UPPER AIR DATA 1660020374 WHITE SANDS TABLE VI.

GEODETIC COORDINATES 32.40043 LAT DEG 106.37033 LON DEG

INDEX OF REFRACTION	1.000266				1.000242		•	•	1.000225	•	•		•	1.000207	•	•	•	1.000197	•	•	•	•	•	•	.00018	.00018	.00017	.00017	0001
D DATA ON SPEED TN) KNOTS	0-	2.5	5.0	7.4	6.6	O	3	3	S	4	3	12.0	0	9.4	8.8	8.0	7.1	5.8	4.7	4.3	4.5	5.3	6.1	7.3	8.7	0	-	N	14.5
WIND DA DIRECTION DEGREES(TN)		323.0	323.0	323.0	322.8	321.8	321.7	322.9	320.9	315.4	310.6	305-1	305.1	306.4	311.6	313.5	310.2	299.5	277.9	526.6	237.0	236.2	236.5	-	-	-	-	248.1	_
SPEED OF SOUND KNOTS	677.8								669.2		666.5	665.2		662.4	661.0	0	658.0	9.959	655.1	653.6	652.1	650.5	648.8	647.1	645.7	644.3	643.0	641.8	9.049
DENSITY GM/CUBIC METER	1014-4	003	987.3	-		41.			904.2		ċ	868.1		845.0	833.4			799.6							26.	15.	05.	+	8
REL.HUM. PERCENT	25.0	9		3	50.6			:	:	8	2	23.1	3	÷	•			8	÷	9	6	9	3		3	6	2	71.0	6
ERATURE DEWPOINT CENTIGRADE	# # # # # # # # # # # # # # # # # # #		5.0			s.	2					-3.7			-5.2														
TEMPEI AIR DEGREES CI	28.3	56.4	25.9	25.8	55.6	24.7	23.5	22.3	21.2	20.0	18.8	17.7	16.5	15.3	14.1	12.8	11.5	10.2	8.9	7.7	4.9	6.4	3.5	2.0	8.	101	-1.5	-2.4	-3.4
PRESSURE MILLIBARS	881.2	865.8	820.9	836.3	822.0	807.6	793	779	166	752	739.4	726.5	713.7	701.3	9.889	929	663	651	049	628.6	617.2	605.8	294.5	583.5	572.6	561.9	551.3	240.8	530.5
GEOMETRIC ALTITUDE MSL FEET	3989.0	4500.0	200000	5500.0	0.0009	6500.0	7000.0	7500.0	800000	8500.0	0.0006	9500.0	10000.0	10500.0	11000.0	1500	2000	12500.0	3000	13500.0	14000.0	14500.0	15000.0	15500.0	16000.0	16500.0	17000.0	17500.0	00

JETIC COORDINATES 32.40043 LAT DEG 106.37033 LON DEG	INDEX OF REFRACTION	1.000166		.00015	•	1.000192	1.000140	000013	1.000135	1.000132	1.000130	1.000128	1.000125	.00012	00012	.00011	.00011	.00011	.00011	-	.00011	1.000108	•	1.000104	.00010	.00010	1.000099	1.000098	1.000096	.0000
GEODETIC 32.4 106.3	SPEED KNOTS	16.7	18.0	18.6	1001	2.8	5.4	3.4	3.8	5.7	8.6		12.4					•	15.3	16.1	•	15.1		14.8		15.9			16.8	9
	WIND DATA DIRECTION S DEGREES(TN) K	-	271.9	270.2	266.3	266.1	266.3	262.1	246.3	245.4	249.3	:	258.8	529.6	560.6	261.9	260.7	257.7	253.5	249.0	245.4	241.7	237.0	231.7	•	230.4	234.7	240.7	544.5	247.6
DATA 74 (CONT)	SPEED OF SOUND KNOTS	39	8	35	0.450	632.9	32.	630.9	29.	628.8	657.9	627.3	626.4	624.8	623.3	621.7	620.2		617.1					60		0	604.5	605.9	601.3	66
JPPER AIR DAT 1660020374 WHITE SANDS TABLE VI. (CO)	DENSITY SGM/CUBIC METER		62.		7.44.0		N			-	573.5		-		536.8	528.3			503.7	495.8	488.1	4.084		465.5	58.		•	437.2	0	
	REL.HUM. PERCENT	67.7	66.1	9.07	•	3.00		20.3	19.8	19.4	18.8	17.7	16.8				16.4	16.5	16.7			17.1	•	17.4	17.6	-	17.8	•	14.9**	11.5**
T MSL	ERATURE DEWPOINT CENTIGRADE	4.6-	10.	=	-14.3		28.		-30.3	-31.3		-33.2		-35.8	-36.9	-37.9	-38.8	-39.8	9.01-	-41.7	-42.7	-43.7	L. ++-	-45.7	-46.7	-47.7	-48.7	1.64-	-52.3	-55.5
19.00 FEET N 0840 HRS MDT	AIR DEGREES	-4.3	-5.3	-7.2	200	4.6-	-10.1	-11.0	-11.9		-	-13.9	-14.7	•	-17.2	-18.5	-19.8	-21.0	-22.3	-23.6	-54.8	-26.1	-27.4	-28.6	-59.9	-31.2		3	-34.9	•
STATION ALIITUDE 3989.00 FEE 15 JUNE 78 0840 HRS 1 ASCENSION NO. 374	PRESSURE MILLIBARS	520.5	510.6		19101			453.			427.	419.	410.						362.8								306.	300		287.
STATION ALTITU 15 JUNE 78 ASCENSION NO.	GEOMETRIC ALTITUDE MSL FEET	18500.0	19000.0	19500 0	20500.0	21000.0	21500.0	22000.0	22500.0	23000.0	23500.0	24000.0	24500.0	25000.0	25500.0	26000.0	26500.0	27000.0	27500.0	28000.0	28500.0	29000.0	29500.0	30000.0	30500.0	31000.0	31500.0	32000.0	32500.0	33000.0

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

COORDINATES 0043 LAT DEG 7033 LON DEG	INDEX OF REFRACTION	1.000093	6000	.0000	-		.0000	.0000	•	1.000080	•	1.000078	•	•		1.000072		1.000069		1.000067	1.000065	•	000	.000	.000	1.000059	.00005	.00005	1.000056	.00005	•00000
GEODETIC COC 32.40043 106.37033	SPEED KNOTS	9	9	6	21.2	2	8	:	-	3	2	3	5	-	6		.0	-	2	2	3	5		-	-	8	6	9	t	-	6
	DIRECTION SDEGREES(TN)	251.1	254.7	258.9	261.4	261.3	261.3	261.4	263.0	266.0	268.7	271.0	272.6	271.4	270.0	267.3	564.6	265.9	267.2	268.7	270-1	270.5	270.8	270.6	270.3	569.9	569.6	271.8	274.4	274.8	275.2
DATA 74 DS (CONT)	SPEED OF SOUND KNOTS	598.1	96	94.		92	591.3		588.2		585.0	583.4	581.8	580.2	578.9	577.7	576.6	575.3	574.0	572.7	571.4	570.2	568.9	567.6	566.3	565.0	563.7	562.4	561.1	560.1	559.1
UPPER AIR DAT 1660020374 WHITE SANDS TABLE VI. (CO)	DENSITY GM/CUBIC METER	415.9			395.3			374.2			355.0	348.9	342.9	337.0	330.7	324.3	318.0	311.8	305.6	299.6	293.8	288.0	282.4	276.9	271.5	266.2	261.0	255.9	250.9	45.	40
	REL.HUM. PERCENT	8.1**	4.7.4	1.2**																											
T MSL MDT	PERATURE DEWPOINT CENTIGRADE	-59.3		-																											
9.00 FEET 0	TEMPER AIR D DEGREES CE	-37.4	-38.7	-39.9	-41.0	-41.9	-42.8	-43.9	-45.2	4.94-	9.24-	6.84-	-50.1	-51.4	-52.4	-53.2	-54.1	-55.1	-56.1	-57.0		-59.0	-59.9	6.09-	-61.9	-62.8	-63.8	-64.8		-66.5	-67.5
ALIITUDE 3989.00 FEET 78 0840 HRS MI NN NO. 374	PRESSURE MILLIBARS	281.4	275.3	269.3	263.4	257.6	551.9	246.2	540.6	235.2	229.8	554.6	219.5	214.5	506.6	204.7	199.9	195.2	190.5	185.9	181.4	177.1	172.8	168.7	164.7	160.7	156.8	153.1	64		45.
STATION ALTITION ALTITION TO ASCENSION NO.	GEOMETRIC ALTITUDE MSL FEET	33500.0	34000.0	34500.0	35000.0	35500.0	36000.0	36500.0	37000.0	37500.0	38000.0	38500.0	39000.0	39500.0	0.0000+	40200.0	41000.0	41500.0	45000.0	45200.0	43000.0	43200.0	0.000++	44500.0	45000.0	0	46000.0	46500.0	7000	200	48000.0

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES 32-40043 LAT DEG 106-37033 LON DEG	INDEX OF REFRACTION	1.000052 1.0000551 1.0000649 1.0000447 1.0000447 1.0000441 1.000039 1.000034 1.000034 1.000034 1.000034
32.4 106.3	DATA SPEED N KNOTS	1100 100 100 100 100 100 100 100 100 10
	WIND DA DIRECTION DEGREES(TN)	+690.00 500.0
DATA 174 IDS (CONT)	SPEED OF SOUND KNOTS	555 555 555 555 555 555 555 555 555 55
UPPER AIR DA 1660020374 WHITE SANDS TABLE VI. (C	DENSITY GM/CUBIC METER	23.05 22.05 22.05 22.05 22.05 23.05 25 25 25 25 25 25 25 25 25 25 25 25 25
.	REL.HUM. PERCENT	
ET MSL MDT	PERATURE DEWPOINT CENTIGRADE	# 1
19.00 FEET N 0840 HRS MDT	TEMPER AIR D DEGREES CE	669 669 669 669 669 669 669 669 669 669
ALTITUDE 3989.00 78 0840	PRESSURE MILLIBARS	138.5 131.7 128.4 128.4 118.9 1118.9 1102.0 102.4 96.9 94.5 89.6 87.6
STATION AL 15 JUNE 78 ASCENSION	GEOMETRIC ALTITUDE MSL FEET	48500.0 49500.0 50000.0 51500.0 51500.0 52500.0 53500.0 54500.0 55500.0 55500.0 55500.0 55500.0

T MSL	MOT
FEET	HRS
3989.00	0840
ALTITUDE	78 NO. 374
STATION	ASCENSION NO.

MANDATORY LEVELS 1660020374 WHITE SANDS TABLE VII.

GEODETIC COORDINATES 32.40043 LAT DEG 106.37033 LON DEG

DATA	IN) KNOTS	5.1	13.4	14.8	9.3	5.5	5.7	11.8	18.5	3.6	12.1	16.0	16.8	22.4	20.2	26.0	24.7	16.1	11.8
ATAD ONIW	DEGREES (1	323.0	321.4	314.2	306.9	296.4	235.9	240.5	270.0	255.2	259.8	246.0	241.0	261.4	264.7	270.7	273.9	256.8	242.3
REL . HUM.	Luck	26.	21.	22.	24.	33.	50.	72.	71.	20.	16.	17.	18.						
TEMPERATURE DEMOCINT	CENTIGRADE	4.9		-2.4	-5.5	-5.6	-5.3	-5.9	-11.7	-29.7	-36.3	-42.5	8.64-						
1	DEGREES	25.9	24.0	19.8	15.2	10.0	4.2	-1.6	7-4	-11.4	-16.4	-24.5	-33.8	-43.1	-54.1	-59.4	-65.6	-70.7	-69.5
PRESSURE GEOPOTENTIAL	FEET	5029.	6774.	.6098	10540.	12580.	14741.	17040.	19511.	22184.	25122.	28365,	31981.	36087.	*1080*	43671.	46791.	50381.	54716.
PRESSURE GI	MILLIBARS	850.0	800.0	750.0	700.0	0.059	0.009	920.0	200.0	450.0	0.004	350.0	300.0	250.0	200.0	175.0	150.0	125.0	100.0

1SL	
FEET NHRS MOT	
4126.59 FEET MSL 0930 HRS MDT	1
G	454 NO. 354
STATION ALTIT	ASCENSTO

DATA			
SIGNIFICANT LEVEL	1660010354	HOLLOMAN	TARIF VIII

GEODETIC COORDINATES 32.88865 LAT DEG 106.09965 LON DEG

REL.HUM. PERCENT	1 1 2 4 8 4 8 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
RATURE DEWPOINT CENTIGRADE	111111 5404400 504400 60460 60
TEMPER AIR DEGREES	
GEOMETRIC ALTITUDE MSL FEET	4176.6 10568.5 10568.3 10568.3 10410.3 1041
PRESSURE MILLIBARS	4

STATION ALTITUDE 4126.59 FEET MSL 15 JUNE 78 0930 HRS MDT ASCENSION NO. 354

SIGNIFICANT LEVEL DATA
1660010354
HOLLOMAN
TABLE VIII. (CONT)

GEODETIC COORDINATES 32.88865 LAT DEG 106.09965 LON DEG

PRESSURE GEOMETRIC TEMPERATURE REL.HUM.
ALTITUDE AIR DEWPOINT PERCENT
MILLIBARS MSL FEET DEGREES CENTIGRADE

ALTITUDE AIR DEW 36.0 75783.6 -51.9 33.6 77266.0 -50.7 30.0 79697.1 -52.7 26.4 82427.6 -52.7 20.0 88441.0 -46.7 17.0 92024.2 -44.9 12.0 99770.3 -43.0 10.5 102788.1 -37.7

DETIC COORDINATES 32.88865 LAT DEG 106.09965 LON DEG	INDEX OF REFRACTION			1.000225 1.000225 1.000217 1.000214	1.000211 1.000208 1.000206 1.000203 1.000200	
GEODETIC 32.8 106.0	SPEED SPEED KNOTS	N 4 4 K			13.6 14.2 13.3 12.2 11.0	
	WIND DIRECTION DEGREES(TN)	218.4	154.0 194.3 275.4	288.3 292.3 291.6 290.1	283.0 276.6 270.0 263.7 258.3 247.9	240.4 232.2 232.2 2433.6 251.3 256.7 256.7 243.6 243.6
54 54	SPEEU OF SOUND KNOTS	680.2 678.6 676.5		669.8 668.6 667.2 665.7	664.2 662.8 661.2 659.6 658.0 656.5	860 860 860 860 860 860 860 860
UPPER AIR DATA 1660010354 HOLLOMAN TABLE IX.	DENSITY GM/CUBIC METER	1002.4 994.3 983.6		903.6 891.0 879.2 367.5	856.0 844.7 833.3 822.1 811.1 789.6	779.1 768.7 758.4 747.3 736.5 725.6 715.3 705.0 694.8
2 7 1 10 10 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	REL . HUM. PERCENT	25.50 25.50 25.00		220.3	23.7 26.7 30.6 32.5 34.5 5	00000000000000000000000000000000000000
T MSL OT	ERATURE DEWPOINT CENTIGRADE	78.0	NO 8 9 9	11.1.1.1.1.1.3.0	1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0	17.1 17.1 18.2 19.1 10.1 10.1
6.59 FEE	AIR DEGREES C	067			80 - 10 - 00	+ 0 + 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ALTITUDE 4126.59 FEE 0930 HRS N N NO. 354	PRESSURE MILLIBARS	877.2 866.0 851.3	822.2 808.0 794.0 780.3	766.8 740.2 727.1	714.3 701.7 689.0 676.5 664.3 652.2	628.8 617.4 606.1 594.8 572.7 561.9 551.4 520.9
STATION ALTI 15 JUNE 78 ASCENSION NO	GEUMETRIC ALTITUDE MSL FEET	4126.6 4500.0 5000.0			10000.0 10500.0 11000.0 11500.0 12000.0 13000.0	13500.0 14000.0 14500.0 15000.0 16500.0 17500.0 17500.0 18500.0

TES DEG DEG	z	69	55	50	45	43	01	38	35	33	30	28	26	24	22	19	17	15	14	12	10	90	90	05	03	01	00	86	96	0	93
COORDINATES 8865 LAT DEG 9965 LON DEG	INUEX OF REFRACTION	.0001	.0001	.0001	1.00014	1.00014	1.000140		•	1.000133	•	•	1.0001	•	•	•	1.000117	•	1.000114	1.000112	1.0001	1.0001	1.000106	•		•	•	1.000098	1.0000	.0000	000
~ ~	I				_						_															_					_
GEODETIC 32.6 106.0	SPEED KNOTS	15.2	S	9.6	8.3	7.7	7.4	7.3	8.2		10.9	12.1	12.4	12.9	13.9	15.1	16.5	7	18.0	18.7	20.0	21.7	22.5	23.1	23.0	22.8	22.4	22.0	22.1	22.4	23.3
	DIRECTION DEGREES(TN)	247.4	243.9	234.7	225.2	216.4	210.9	207.1	211.5	216.9	221.9	225.1	225.4	228.0	235.1	241.3	246.7	247.8	546.4	239.7	233.6	228.5	227.0	226.3	N	21	22.	÷	228.3	•	31
DATA 354 (CONT)	SPEED OF SOUND KNOTS	637.9	636.8	635.3	633.9	632.7	631.6	630.4	629.2	628.1	26		624.5	623.4		620.5	619.0		616.0	614.4	615.9	611.4	6.609	608.3	606.8	605.3	3	602.2	9.009	66	597.5
JPPER AIR 1660010 HOLLOMAN ABLE IX.	DENSITY S GM/CUBIC METER	663.7	653.3		633.9	623.7	613.7	603.8			575.1	565.9	556.8	547.9	539.1	530.5	522.0	513.7	505.5	4.764	489.5	481.8	474.1	466.6					430.6		416.3
	REL.HUM. PERCENT	20.0	9.44	32.8	24.7	23.9	23.0	25.2	21.4	•	19.7	18.9	18.1	17.3		17.1	17.2			17.4	•	•	17.6	•	•	•	17.9	18.0	14.7**	11.2**	7.7**
T MSL	ERATURE DEWPOINT CENTIGRADE	-14.2		-21.0	-25.1	-26.3	-27.5	-28.7	-59.9	-31.2	-32.4	-33.6	-34.9	-36.1	-37.2	-38.2	-39.2	-40.5	-41.2	-45.2	-43.1	-44.1	-45.1	-46.1	-47.1	-48.1	-49.1	-50.1	-52.9	-56.1	0.09-
6.59 FEET 0930 HRS MDT	TEMPERA AIR DE DEGREES CEN	-5.4	-6.3	-7.5		-9.5	•		-12.4	-13.3	-14.3	-15.3	-16.2	-17.2	-18-3	6	-20.8	-22.0	-23.2	-54.4	-25.7	-56.9	-28.1	-29.3	-30.6	-31.8	-33.0	-34.2	5	-36.7	-
ALIITUDE 4126.59 78 0930 H	PRESSURE MILLIBARS	510.8	501.0	491.4	481.8	472.3	463.0	453.8	6.444	436.1	457.5	419.1	410.8	405.7	394.5	386.3							333.5	326.6	319.8	313.2	306.7	300.3	293.8	287.4	281.2
STATION ALIIT	GEOMETRIC ALTITUDE MSL FEET	19000.0	19500.0	2000000	20500.0	2100000	21500.0	22000-0	22500.0	23000.0	23500.0	24000.0	24500.0	25000.0	25500.0	2600000	26500.0	27000-0	27500.0	28000.0	28500.0	2900000	69500.0	3000000	-			32000.0			1

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

DETIC COORDINATES 32-88865 LAT DEG 106-09965 LON DEG	INGEX OF REFRACTION	1.000091 1.000090 1.000083 1.000083 1.000083 1.000083 1.000083 1.000074 1.000072 1.000068 1.000063 1.000063 1.000063 1.000063 1.000063	1.000053
GEODETIC 32-8 106-0	DATA SPEED N KNOTS		21.7
	WIND DA DIRECTION DEGREES(TN)	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	255.8
DATA 354 (CONT)	SPEED OF SOUND KNOTS	5996 5996	558.9 558.0
UPPER AIR DA 1660010354 HOLLOMAN TABLE IX. (CON	DENSITY GM/CUBIC METER	50000000000000000000000000000000000000	239.6
	REL.HUM. PERCENT	* * * * * * * * * * * * * * * * * * *	
IT MSL MDT	TEMPERATURE R DEWPOINT EES CENTIGRADE	4.50-	
6.59 FEET M 0930 HRS MDT	TEMF AIR DEGREES	00000000000000000000000000000000000000	-67.3
ALIITUDE 4126.59 78 N. NO. 354 0930	PRESSURE MILLIBARS	2553 2693 2693 224 255 234 255 250 250 250 250 250 250 250 250 250	141.6
STATION AL 15 JUNE 78 ASCENSION	GEOMETRIC ALTITUDE MSL FEET	34500000 34500000 345000000 345000000 3450000000 44500000000000000000000000000	48500.0

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

DETIC COORDINATES 32-88865 LAT DEG 106-09965 LON DEG	INDEX OF REFRACTION		1.000048		1.000041		1.000037	1.000034	1.000032			1.000027	1.000027	1.000025	.00002
GEODETIC 32.8 106.0	SPEED KNOTS	19.3 19.1	17.8 16.0 14.5		15.6	14.5	12.6	13.4	13.2	10.6	10.0		0.0		12.6
	WIND DATA DIRECTION SI DEGREES(TN) K	253.4 255.7 257.9	258.0 257.2 252.3	229.8	226.1	222.3	208.3	201.4 200.3 198.5	196.3	161.6	161.4	169.0	160.0	95.3	89.4
DATA 354 (CONT)	SPEED OF SOUND KNOTS	557.1 556.6 556.2	555,9 555,6 555,3	554.4	551.7	552.3	554.6	554.1	559.9	560.8	561.7	561.6	563.2	565.5	566.4
UPPER AIR DATA 1660010354 HOLLOMAN TABLE IX. (CONT)	DENSITY S GM/CUBIC METER	229.4 224.1 218.7	213.5	198.8	185.9	176.2	166.0	158.1	143.5	136.1	129.0	122.8	119.1	112.5	109.4
Э Е	REL.HUM. PERCENT														
FEET MSL HRS MDT	PERATURE DEWPOINT CENTIGRADE														
4126.59 FEET 0930 HRS M	TEMPER AIR D DEGREES CE	800	-69.8	-70.6	100	-72.2		-70.9		-65.9	50	-65.3	-64.2		-61.8
TUDE	PRESSURE MILLIBARS		124.8 121.6 118.6	115.6	107.0	101.7	96.6	91.8 89.5 87.2	85.1	80.9	77.0	73.3	71.5		4.99 64.8
STATION ALTITION 15 JUNE 78 ASCENSION 10	GEOMETRIC ALTITUDE MSL FEET	0.00064	51000.0 51500.0	52500.0		55000.0	55500.0	52500.0 57500.0	58000.0	59500.0	6000000	61000-0	620000	0.500.0	63500.0

DETIC COORDINATES 32-8885 LAT DEG 106-09965 LON DEG	INDEX OF REFRACTION		
32.60 106.0	DATA SPEED N KNOTS		20.0 20.0 20.1 20.1
	WIND DA	88888888888888888888888888888888888888	8822.4 882.4 882.4 882.4 882.4
DATA 354 (CONT)	SOUND KNOTS	500 500 500 500 500 500 500 500	580.8 580.8 580.8 580.3
UPPER AIR DATA 1660010354 HOLLOMAN TABLE IX. (CONT)	DENSITY GW/CUBIC METER	100 000 000 000 000 000 000 000 000 000	6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
, ,	REL.HUM. PERCENT		
•59 FEET MSL 930 HRS MDT	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE		5150
ALTITUDE 4126.59 78 IN NO. 354	PRESSURE MILLIBARS D	00000000000000000000000000000000000000	34.0 34.0 32.5 3.5 5.5
STATION AL	GEUMETRIC ALTITUDE MSL FEET	655000.0 655000.0 655000.0 655000.0 655000.0 70500.0 72500.0 74500.0 75500.0	

STATION ALTIT 15 JUNE 78 ASCENSION NO.	354	26.59 FEET MSL 0930 HRS MDT	ı, t	UPPER AIR DA 1660010354 HOLLOMAN TABLE IX. (CON	DATA 354 (CONT)		GEODETIC 32.86 106.09	DETIC COOMDINATES 32.88865 LAT DEG 106.09965 LON DEG
GEUMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGHADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DA DIRECTION DEGREES(IN)	DATA SPEED I) KNOTS	INDEX OF REFRACTION
79000-0	31.0	-52.1		48.8	S	81.7	19.7	1.000011
	30.3	-52.5				81.6	19.4	1.000011
202000	28.90	52.7		40.7	278.4	6.18	20.00	1.000010
0.00018	28.2	-52.7		; ;	578.4	82.8	21.1	
81500.0	27.6	-52.7			578.4	82.0	22.1	1.000010
82000.0	56.9	-52.7			578.4	81.2	23.0	1.000009
82500.0	26.3	-52.6		•	578.5	0.08	23.6	1.000009
	25.7	-52.1			579.5	77.4	22.9	1.000009
	25.1	-51.6			579.8	4.6	25.5	1.000009
	24.0	-51.1		38.5	580.5	71.8	22.1	
35000-0	23.4	-50.1			581.1	1.69	24.5	1.000008
	22.9	9.69-		35.7	582.4	0.00	24.46	1.000008
	22.4	-49.1			583.1	63.8	26.5	1.000008
	21.9			33.9	583.7	62.8	28.5	1.000008
	21.4	-48.1			584.4	65.9	28.6	1.000007
1	50.9	-47.6		32.3	585.0	63.1	28.8	1.000007
88000.0	50.4	-47.1			585.7	0.49	28.8	1.000007
	19.9	1-91-		0	586.3	6.99	28.4	1.000007
0.00069	19.5			•	586.6	6.69	28.1	1.000007
	19.1			29.3	586.9	73.1	28.1	1.000007
	18.6	-45.9		8	587.3	76.5	28.5	1.000006
	18.2	-45.7		27.9	587.6	79.8	29.0	1.000006
91000.0	17.8				587.9	81.4	29.3	1.000006
91500.0	17.4	-45.2		26.6		81.7	29.5	1.000006
92000.0	17.0	6.44-		26.0		81.9	29.8	1.000006
92500.0	16.6	8.44-		25.4		81.1	30.1	1.000006
93000.0	16.3			24.8		79.5	30.6	
93500.0	5	-44.5			589.0	78.1		1.000005

GEODETIC COOKDINATES 32.88865 LAT DEG 106.09965 LON DEG	INDEX OF REFRACTION	1.000005	1.000005	1.000005	1.000005	1.000005	1.000005	1.000004	1.000004	1.000004	1.000004	1.000004	1.000004	1.000004	1.000004	1.000004	1.000004	1.000004
GEODETI 32. 106.	SPEED KNOTS	31.2	30.9	31.1	31.5	31.9	32.2	32.3	32.5	33.0	33.7	34.4	34.7	35.0	35.2			
	WIND DATA DIRECTION SI DEGREES(IN) K	77.0	75.1	73.7	72.1	20.07	8.69	h·69	6.89	68.1	67.1	7.99	65.4	2.49	0.49			
354 (CONT)	SOUND KNOTS	589.2	589.4	589.7	589.8	290.0	590.1	590.3	590.5	9.069	590.8	6.065	591.5	592.7	593.8	6.465	596.0	597.1
UPPER AIR DATA 1660010354 HOLLOMAN TABLE IX. (CONT)	DENSITY GM/CUBIC METER	23.7	22.6	22.1	21.6	21.1	20.6	20.2	19.7	19.3	16.8	18.4	17.9	17.5	17.0	16.0	16.2	15.8
<u>۽</u> د	REL. HUM. PERCENT																	
ET MSL MDT	TEMPERATURE R DEWPOINT EES CENTIGKADE																	
6.59 FEE	TEMP AIR DEGREES	1.11-	-44.5	0.44-	-43.9	-43.8	-43.7	-43.6	-43.4	-43.3	-43.2	-43.1	-45.6	-41.7	8.04-	0.01-	-39.1	-38.5
.TITUDE 412 3 .40. 354	PRESSURE MILLIBARS	15.6	14.9	14.5	14.2	13.9	13.6	13.3	13.0	12.7	12.4	12.1	11.9	11.6	11.4	11.1	10.9	10.6
STATION ALTITUDE 4126.59 FEET N 15 JUNE 78 0930 HRS MDT ASCENSION .10. 354	GEUMETRIC ALTITUDE MSL FEET	0.000%6	94500.0	95500 • 0	0.00096	96500.0	9.00026	97500.0	9900006	94500.0		0.00566	1000001	100500.0	101000.0	101500.0	102000.0	102500.0

STATICN ALIITUDE 4126.59 FEET MSL 15 JUNE 78 0930 HRS MDT ASCENSION NO. 354

MANDATORY LEVELS 1660010354 HOLLOMAN TABLE X.

GEODETIC COORDINATES 32.88865 LAT DEG 106.09965 LON DEG

DATA N SPEED	30000000000000000000000000000000000000
WIND DATA DIRECTION S DEGREES(TN) K	25.33 25.33
REL.HUM. PERCENT	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
TEMPERATURE R DEWPOINT EES CENTIGRADE	210111111 01000000000000000000000000000
AI	0.4.0.4.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0
PRESSURE GEOPOTENTIAL ILLIBARS FEET	5041. 8624. 10558. 112598. 117057. 17057. 17057. 25126. 25126. 26126. 26126. 26126. 26061. 40651. 46727. 59036. 61706. 61854. 79350. 79357.
PRESSURE G MILLIBARS	8850 775000 775000 75000 65000 75000 75000 117500 1
Σ	

MSL	
3951.40 FEET	1030 HRS MDT
ALTITUDE	15 JUNE 78 ASCENSION NO. 6
STATION	15 JUNE ASCENSTO

DATA		
SIGNIFICANT LEVEL 1660050067	APACHE	TARIF VI

GEODETIC COORDINATES 32.62700 LAT DEG 106.39352 LON DEG

REL.HUM. PERCENT	6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
RATURE DEWPOINT CENTIGRADE	11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1
TEMPER AIR DEGREES	2000 2000 2000 2000 2000 2000 2000 200
GEUMETRIC ALTITUDE MSL FEET	3951.4 5053.7 6073.9 10505.7 114929.0 117848.4 19220.8 19558.2 20054.0 23404.0 33059.3 33059.3 45263.5 46862.0 553894.6 551350.9 6890.3.8
PRESSURE MILLIBARS	8888 8880 7440

TATION	N ALTITUDE	3951.40	FEET	ASL
15 JUNE 78		1030 HRS	S MOT	

SIGNIFICANT LEVEL DATA
1660050067
APACHE
TABLE XI. (CONT)

GEODETIC COORDINATES 32.62700 LAT DEG 106.39352 LON DEG

TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	-53.9 -45.6 -44.2 -39.3
URE GEOMETRIC ALTITUDE ARS MSL FEET	0 79710.0 68489.3 96366.2 0 103944.2
PRESSURE MILLIBARS	30.0

REL.HUM. PERCENT

STATION ALII 15 JUNE 78 ASCENSION NO	TUDE 39	151.40 FEET	T MSL		UPPER AIR DATA 1660050067 APACHE TABLE XII.	DATA 67		GEODETIC 32.6, 106.3	DETIC COORDINATES 32.62700 LAT DEG 106.39352 LON DEG
GEUMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR DEGREES	PERATURE DEWPOINT CENTIGNADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DA DIRECTION DEGREES(IN)	DATA SPEED N KNOTS	INDEX OF REFRACTION
3951.4	862.6		7.3	23.0	1007.1	680	350.0	4.4	1.000266
5000.0		30.1	4.9	22.0	991.0	679.8	332.7	5.0	1.000254
5500.0		29.1	#.B	20.6	961.1	678.6	15	7.4	
6500.0	808		2.8	20.5	934.0	676.6	322.0	9.6	1.000240
7500.0		25.8	1.9	21.1	922.9		323.2	10.2	1.000235
0.0008				22.2	901.3	671.	303.0	12.1	1.000227
8500.0	754.4	21.1	7:	22.8	890.7	669	290.2	•	•
9500.0		18.4	-2.4	24.3	867.8	666.0	286.2	17.5	1.000220
10000.0		17.1	-3.1	25.1	856.3	. 499	284.5	17.7	
10500.0	702.6	15.8	-3.7	25.8	845.1	663	282.3	17.6	1.000209
11500.0		13.1	1.1-		822.5	659	277.2		
12000.0	665.1	11.7	14.8	31.2	811.5	658.3	274.6	•	•
13000.0		9.0	5.5.	34.9	789.9	656.7	259.9	9.01	1.000198
13500.0		7.6	-6.2	36.7	779.3	653.5	248.8	9.0	
14000.0		6.5	9-9-	38.6	169.0	651.	242.4	0	1.000169
14500.0	6.909	6.4	4-7-	t.0+	758.8		238.8	•	1.000186
15500.0		0.0	9.7-	43.1	727		236.0	•	.00018
16000-0		1.2	9.9-	56.1	726.9	0.40	237.4	13.5	1.000183
10500.0	563	0:-	-7.7	56.3	716.5	9.449	246.6	16.5	
17000-0			-8.8	9.95	706.2		253.0		1.000173
17500.0	542.0	-2.5	-9.8	56.8		-	258∙€	6	•
18000.0	3		-10.6	58.3	0.989	640.1	262.0	20.5	1.000167

10 (0 (0					
DETIC COORDINATES 32-62700 LAT DEG 106-39352 LON DEG	INCEX OF REFRACTION	1.000165 1.000163 1.000160 1.000154		1.000129 1.000126 1.000124 1.000122	1.000114 1.000112 1.0001103 1.000103 1.000103 1.000103 1.000103 1.000098
GEODETIC 32.5 106.3	DATA SPEED N KNOTS	19.8 17.3 10.9	966496	10111108	117. 118. 118. 119. 119. 119. 119. 119. 119
	WIND DA DIRECTION DEGREES(TN)	262.1 260.3 256.5 250.6 240.7	199.5 183.4 185.7 196.5	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2336 2326 2326 2336 2336 2336 2336 2336
DATA 57 (CONT)	SPEED OF SOUND NNOTS	638.7 637.3 636.1 635.4 634.3	630.8 629.8 629.7 628.6	6266.3 622.0 622.0 620.5	616.0 6114.6 611.1 611.1 606.7 606.7 600.7 600.2
UPPER AIR DATA 1660050007 APACHE TABLE XII. (CON	DENSITY GM/CUBIC METER	מיני בי מימים	613 613 604 594 584 73 73	566.2 556.2 566.2 540.1 531.7 523.5	6007.2 6007.2
	REL.HUM. PERCENT		43.0 35.2 31.5 7.7		10000000000000000000000000000000000000
T MSL MDT	ERATURE DEWPOINT CENTIGKADE	111111111111111111111111111111111111111	86.220	3333	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1.40 FEET N	TEMPERA AIK DE DEGREES CEN	-4.9 -7.1 -8.4	110.2 111.2 12.1 13.0	114.8 117.1 118.3 120.7	
ALTITUDE 3951.40 78 N WO. 67 1030	PRESSURE MILLIBARS	521.5 511.5 501.7 492.0 473.0	463.7 454.6 437.0	420.0 411.6 403.4 395.2 387.2 379.4	364.0 3564.0 3499.1 324.8 327.9 314.0 314.0 300.8 294.3
STATION ALTI 15 JUNE 78 ASCENSION NO	GEGMETRIC ALTITUDE MSL FEET	16500.0 19000.0 19500.0 20000.0 20500.0	21500.0 22000.0 22500.0 23000.0 23500.0	240000 2500000 2550000 2600000	275000 2850000 2950000 305000 315000 325000 335000

ETIC COORDINATES 32.62700 LAT DEG 06.39352 LON DEG	INDEX OF REFRACTION	1.000093	600000	1.000090	0000	.0000	.0000	1.000082	1.000081		1.000078		1.000075	1.000074				1.000068	1.000067	1.000066		•00000	.00006		900000	.00005		1.000056	1.000055	.00005
GEODETIC COU 32.62700 106.39352	EED OTS	22.8	23.4	24.0	24.6	24.5	24.3	23.2	21.9	20.7	19.5	20.1	21.0	23.6	56.4	27.8	29.1	28.6	28.0	27.7	27.4	28.5	29.7	30.1	30.2	g	27.0	S	24.3	3
	WIND DATA DIRECTION SP DEGREES(TN) KN	245.1	246.3	247.0	252.8	256.0	260.7	262.6	264.3	265.5	266.8	568.9	2.075	270.3	269.7	268∙6	268.0	268.7	569.4	569.6	269.7	269.3	268.6	268.7	268.7	269.0	269.6	270.0	271.0	271.4
DATA 67 (CONT)	SPEED OF SOUND KNOTS	4.765	596.0	594.1	592.0	590.6	589.	58		584.3	585		516						571.2			567.		564.3			561		3	559.2
UPPER AIR DATA 1660050067 APACHE TABLE XII. (CON	DENSITY GM/CUBIC METER	417.2	6.604	102.7	388.7	381.9	375.3	368.7	362.4	350.1	349.9	343.9	337.6	331.4	325.3	319.4	313.2	307.1	301.2	295.4	289.7	284.2	278.7	273.3	267.8	261.9		250.5	245.0	239.7
3	REL.HUM. PERCENT	20.6**	16.8**	12.9**	5.2**	1.3**																								
T MSL MDT	PERATURE DEWPOINT CENTIGKADE	-52.2	-54.9	8.76-	99	-76.2																								
11.40 FEET N 1030 HRS MDT	TEMPERA AIR DE DEGREES CEN	-38.0	-39.1	-40.5	-42.3	-43.3	-44.5	-45.7	-47.0	-48.2	-49.5	20.1	-51.8	-52.9	-54.0	-55.1	-56.1	-57.2	-58.5	-59.5	-60.2	-61.3	-62.3	-63.3	-64.1	-64.7	-65.2	-65.8	1.99-	-67.1
1 ITUDE 395 NO. 67	PRESSURE MILLIBARS	281.6	275.4	4.692	257.6		246.3	240.7	235.2	556.6	254.7	519.6	214.5	50602	504.6	199.9	195.1	•	185.9	181.4	177.1	172.8	168.7		160.7	156.7	152.9	149.1	•	141.8
STATION ALITTUDE 3951.40 FEET 15 JUNE 78 ASCENSION NO. 67 1030 HRS MI	GEUMETRIC ALTITUDE MSL FEET	33500.0	34000.0	35000-0	35500.0	36000.0	36500.0	37000.0	37500.0	38000.0	38500.0	39000.0	39500.0	0.0000+	40500.0	41000.0	41500.0	45000.0	45200.0	43000.0	43200.0	0.000**	44500.0	4500000	45500.0	4600000	46500.0	47000.0	47500.0	480000.0

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALIT	ALITUDE 3951.40 FEET 78 1030 HRS MI N NO. 67	51.40 FEET MSL 1030 HRS MDT	,	UPPER AIR DATA 1660050067 APACHE TABLE XII. (CON	DATA 67 (CONT)		GEODETIC 32.6 106.3	ETIC COORDINATES 32.62700 LAT DEG 06.39352 LON DEG
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DA DIRECTION DEGRÉES(TN)	DATA SPEED N KNOTS	INJEX OF REFRACTION
48500.0	138.2	-67.8		234.5	558.3	274.3	23.2	1.000052
9-00064		-68.5		229.4	ហ	277.2	CO.	1.000051
5000000	128.2	-69.8		219.6	555.	269.4	19.2	1.000049
50500.0		-70.2		214.6	554.	262.7	17.7	1.000048
51000.0		-70.0	•	208.9	555.	254.6	17.1	1.000047
51500.0		-70.1		203.7		246.8	16.8	1.000045
52000.0				199.3		248.1	16.6	1.000044
53000-0		-71.6		194.9		249.5	16.4	1.000043
53500.0				186.5		240.0	16.1	1.000042
54000.0	104	-73.3		182.0	550.7	238.5	16.1	
24500.0	-	-71.9		176.2		235.0	16.0	1.000039
55000.0				170.9	u,	230.8	15.8	1.000038
55500.0				166.6	u)	554.6	15.4	
26000.0	2.46			162.4	וינש	218.1	15.1	1.000036
0.00696		•		157.9	י כט	210.9	14.7	
57500.0	89.0	-69.5		153.4	555.9	203.4	14.5	1.000034
58000.0		-67.8		144.7	, 4,	192.4	13.1	1.000032
58500.0	83.2	-67.0		140.5		187.4	O	1.000031
0.00066	81.1	-66.1		136.5	വ	183.5	10.7	1.000030
59500.0	79.1	-65.3		132.6		178.3	4.6	1.000030
0.00009	77.2	h·+9-		126.8		174.4	•	1.000029
60500.0	75.3	-63.6		125.1		169.3	7.2	1.000028
0.00019	73.4	-62.7		121.5		156.4	7.4	•
01200.0	71.6	-61.9		8		144.1	8.1	
62000.0	8.69			÷ .	567.		0	•
62500.0	2.89			-	67.	•	3	0
0.00000	6.99	9.09-		109.1	567.9	109.8	15.6	1.000024

STATION ALIIT 15 JUNE 78 ASCENSION NO.	ALTITUDE 3951.40 78 1030	51.40 FEE	ET MSL MDT		UPPER AIR DA 1660050067 APACHE TABLE XII. (TA CONT)		U	DETIC COOKDINATES 32.52700 LAT DEG 106.39352 LON DEG
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR DEGREES	PERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION SPI DEGREES(TN) KNO	SPEED KNOTS	INÚEX OF REFRACTION
63500.0	6.49	1-09-			106.4		108.2	16.1	1.000024
0.00000	63.4	-60.2			103.7		106.6	16.6	•
65000.0		-59.8			7.86	560.0	1100.0	15.9	1.000023
65500.0		6			96.2	569	113.2	15.1	1.00002
0.00099	57	59.4			93.8		112.7	15.6	
66500.0	26	6			91.4	569.9	111.6	16.0	1.000020
67000.0	24	-58.9			89.5	570.2	109.0	16.3	
67500.0	53.5	-58.7			86.9	570.5	106.4	16.5	1.000019
68000.0	55.5	-58.5			8.48		108.0	16.1	1.000019
68500.0	51.0	-58.3			82.7		110.1	15.7	1.000018
0.00069	8.64	58.			90.08		115.0	15.3	1.000018
	48.0	-57.7			78.6		122.1	15.1	1.000017
	47.5	57.			76.6		126.6	14.9	
	1.91	57.			74.7		123.6	14.2	
	45.3	26.			72.9	573.2	120.3	13.5	1.000016
	2.44	-26.4			71.1		110.9	13.5	
72000.0	43.2	-56.0			69.3		101.3	13.8	
	45.2	-55.7			9.79	574.5	95.1	15.6	
	7.14	-55.4			62.9		91.6	18.2	1.000015
	7.04	-52.0			64.5		0.06	20.3	
	39.5	-24.7			9.29		91.1	21.0	1.000014
74500.0	38.4	24.			61.1		92.1	21.8	1.000014
	37.5	-24.0			59.6		93.7	21.4	
*	36.6	3			58.1		95.6	20.7	
76000-0	35.7	3			9.95		97.5	20.5	.00001
-	34.9	3			55.2		98.7	20.0	1.000012
•	34.1	2			3		6.66	19.9	
0	33.3	-52.4			52.5	578.9	100.8	19.5	1.000012
•	N	ż			-	579.3	101.6		

STATION ALIIT 15 JUNE 78 ASCENSION NO.	ALIITUDE 3951.40 78 NN NO. 67	51.40 FEET M	T MSL MDT	_	UPPER AIR DATA 1660050067 APACHE TABLE XII. (CON	DATA 67 (CONT)		GEODETIC 32.62 106.39	DETIC COORDINATES 32-62700 LAT DEG 106-39352 LON DEG
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPE AIR DEGREES C	PERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DAT	SPEED KNOTS	INDEX OF REFRACTION
78500.0	31.8	-52.1			50.0	579	102.5		.00001
800000	29.6	-53.6			44.0	577.2	92.1	18.9	1.000011
80500.0	28.9	-53.2			•	577.8	4.68	-	.00001
41500.0		-52.5			43.5	578.5	89.3		1.000010
82000.0		-51.7			•		-	24.7	
82500.0	25.8	-51.3			t 1 • t	580.3	93.0	25.2	1.000009
83500.0	25.2	-50.3			39.4		•		
94500.0		1.61-			37.4	582.2	90.5	24.0	1.000009
		6.84-				583.4	88.2	24.4	1.000008
	•	4.84-			•	584.0	•	24.7	
865000		-48.0			34.7	584.6	85.8	25.8	1.000008
67000-0		-47.0			33.0	585.8	83.3	29.5	1.000007
	20.9	-46.5				O	83.3	30.5	1.000007
88000.0	•	-46.1			•	587.1	•	30.9	1.000007
0.00000	20.00	0.01				•	86.4	31.5	1.000007
0.0000		0.04			29.9	•	88.5	32.0	1.000007
0.00060		100			29.5	587.9	92.2	32.5	
90500		2000			•	588.0	95.8	33.1	
	10	2004			27.9	588.1	1.66	ທ :	1.000006
	:	7.04-				588.2	99.5	34.2	
		1.04			•	588.4	•	+ L	
92500.0	16.7	0.64						20 1	
	16.3	-44.8			24.9	588.7	98.6	32.1	1.000006
						i			

GEODETIC COORDINATES 32.62700 LAT DEG 106.39352 LON DEG	A INDEX SPEED OF KNOTS REFRACTION	30.6 1.000005	-	-	28.7 1.000005	28.2 1.000005	27.6 1.000005	27.1 1.000005	26.5 1.000005	26.9 1.000005	27.4 1.000004	27.9 1.000004	28.4 1.000004	28.8 1.000004	29.3 1.000004	29.8 1.000004	30.4 1.000004	1.000004	1.000004	1.000004	1.000003	1.000003
95	WIND DATA DIRECTION SPE DEGREES(TN) KNO	95.0							87.3	86.1					84.1	85.6	87.1					
UPPER AIR DATA 1660050067 APACHE TABLE XII. (CONT)	DENSITY SPEED OF GM/CUBIC SOUND METER KNOTS		23.8 588.9		2.7	2.5	1.7	1.2				19.3 591.2	18.8 591.7		18.0 592.5		17.1 593.3	16.7 593.7				
THE STATE OF	REL HUM.																					
11.40 FEET MSL 1030 HRS MDT	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	-44.7	9.44-	6.44.	1.11-	±: ++-	-44.3	-++-1	-43.8	-43.5	-43.2	-42.8	-45.5		-41.9	-41.5	-41.2	6.04-	9.04-	-40.5	-39.9	-39.6
ALTITUDE 3951.40 78 1030 NN NO. 67	PRESSURE MILLIBARS	15.9	15.6	70.01	14.9	14.6	14.2	13.9	13.6	13.3	13.0	12.7	12.5	12.2	11.9	111.7				10.7	10.4	10.2
STATION AL 15 JUNE 78 ASCENSION	GEOMETRIC ALTITUDE MSL FEET	93500.0	0.00046	0.00046	95000-0	95500.0	0.00096	96500.0	97000.0	97500.0	9900000	98500.0	0.00066	99500.0	1000001	1002001	101000.0	101500.0	102000.0	102500.0	103000.0	103500.0

STATION ALTITUDE 3951.40 FEET MSL 15 JUNE 78 1030 HRS MDT ASCENSION NO. 67

MANDATORY LEVELS 1660050067 APACHE TABLE XIII.

GEODETIC COORDINATES 32.62700 LAT DEG 106.39352 LON DEG

ATA	KNOTS	6.3	10.0	15.8	17.5	10.1	11.4	19.5	17.1	7.5	14.1	18.1	22.0	24.4	27.7	27.8	25.4	17.7	16.0	10.1	9.6	15.0	15.4	20.3	18.1	24.4	31.4	28.9	
WIND DATA	DEGREES (TN)	321.5	326.1	287.1	281.9	267.3	237.1	254.2	255.8	180.3	247.8				568.9	269.5	270.4	263.2	232.8	181.2	131.2	112.8	113.2		91.1	91.4	86.2	4.06	
REL . HUM .		21.	21.	23.	20.	33.	42.	57.	72.	37.	22.	23.	25.																
TEMPERATURE R DEMPOINT	w	4.8	2.3	-1.3	-3.9	-5.3	-7.8	0.6-	-11.4	-23.3	-34.1	-40.3	-47.8																
A	S	29.4	26.4	20.5	15.5	10.0	0.4	-1.5	-7.2	-11.6	-17.6	-25.4	-34.8	-43.7	-55.1	-60.7	-65.6	-70.2	-71.0	-65.7	-61.1	-59.7	-58.1	-55.0	-53.9	-50.5	-45.6	-44.5	-10.1
OPOTENTIAL	FEET	5050.	6814.	8659.	10595.	12636.	14795.	17095.	19561	22236.	25166.	28395.	31997.	36094.	40888.	43650.	46754.	5034A.	54672.	59047.	61739.	.06849	68644.	73289.	79368.	83242.	88073.	94380.	103370.
PRESSURE GEOPOTENTIAL	MILLIBARS	850.0	800.0	750.0	200.00	650.0	0.009	250.0	200.0	450.0	0.004	350.0	300.0	250.0	200.0	175.0	150.0	125.0	100.0	80.0	70.0	0.09	20.0	0.04	30.0	25.0	20.0	15.0	10.0

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.